

## Daily Epidemiologic Summary

# COVID-19 in Ontario: January 15, 2020 to March 31, 2021

This report includes the most current information available from CCM as of **March 31, 2021**.

Please visit the interactive [Ontario COVID-19 Data Tool](#) to explore recent COVID-19 data by public health unit, age group, sex, and trends over time.

A [weekly summary report](#) is available with additional information to complement the daily report.

This **daily** report provides an epidemiologic summary of recent COVID-19 activity in Ontario. The change in cases is determined by taking the cumulative difference between the current day and the previous day.

## Highlights

- There are a total of 352,460 confirmed cases of COVID-19 in Ontario reported to date.
- Compared to the previous day, this represents:
  - An increase of 2,557 confirmed cases (percent change of +9.6%)
  - An increase of 23 deaths (percent change of +53.3%)
  - An increase of 1,814 resolved cases (percent change of -8.1%)

In this document, the term 'change in cases' refers to cases publicly reported by the province for a given day. Data corrections or updates can result in case records being removed and or updated from past reports and may result in subset totals for updated case counts (i.e., age group, gender) differing from the overall updated case counts.

The term public health unit reported date in this document refers to the date local public health units were first notified of the case.

## Case Characteristics

**Table 1a. Summary of recent confirmed cases of COVID-19: Ontario**

	Change in cases March 30, 2021	Change in cases March 31, 2021	Percentage change March 31, 2021 compared to March 30, 2021	Cumulative case count as of March 31, 2021
Total number of cases	2,333	2,557	+9.6%	352,460
Number of deaths	15	23	+53.3%	7,389
Number resolved	1,973	1,814	-8.1%	324,196

**Note:** The number of cases publicly reported by the province each day may not align with case counts reported to public health on a given day; public health unit reported date refers to the date local public health was first notified of the case. Data corrections or updates can result in case records being removed and or updated from past reports.

**Data Source:** CCM

**Table 1b. Summary of recent confirmed cases of COVID-19 by age group and gender: Ontario**

	Change in cases March 30, 2021	Change in cases March 31, 2021	Cumulative case count as of March 31, 2021
Gender: Male	1,202	1,278	174,331
Gender: Female	1,112	1,238	176,119
Ages: 19 and under	479	524	50,651
Ages: 20-39	816	941	129,063
Ages: 40-59	685	738	101,343
Ages: 60-79	309	296	49,847
Ages: 80 and over	44	57	21,473

**Note:** Not all cases have a reported age or gender reported. Data corrections or updates can result in case records being removed and or updated from past reports and may result in subset totals (i.e., age group, gender) differing from past publicly reported case counts.

**Data Source:** CCM

**Table 2. Summary of recent confirmed cases of COVID-19 in school aged children by age group, August 30, 2020 to March 31, 2021: Ontario**

	Change in cases March 30, 2021	Change in cases March 31, 2021	Cumulative case count from August 30, 2020 to March 31, 2021
Ages: 4 to 8	108	112	8,994
Ages: 9 to 13	112	126	11,774
Ages: 14 to 17	109	103	11,759

**Note:** Includes all confirmed cases of COVID-19 for specified ages, regardless of school attendance. Data corrections or updates can result in case records being removed and or updated from past reports and may result in subset totals (i.e., age group) differing from past publicly reported case counts.

**Data Source:** CCM

**Table 3. Summary of recent confirmed cases of COVID-19 in long-term care homes: Ontario**

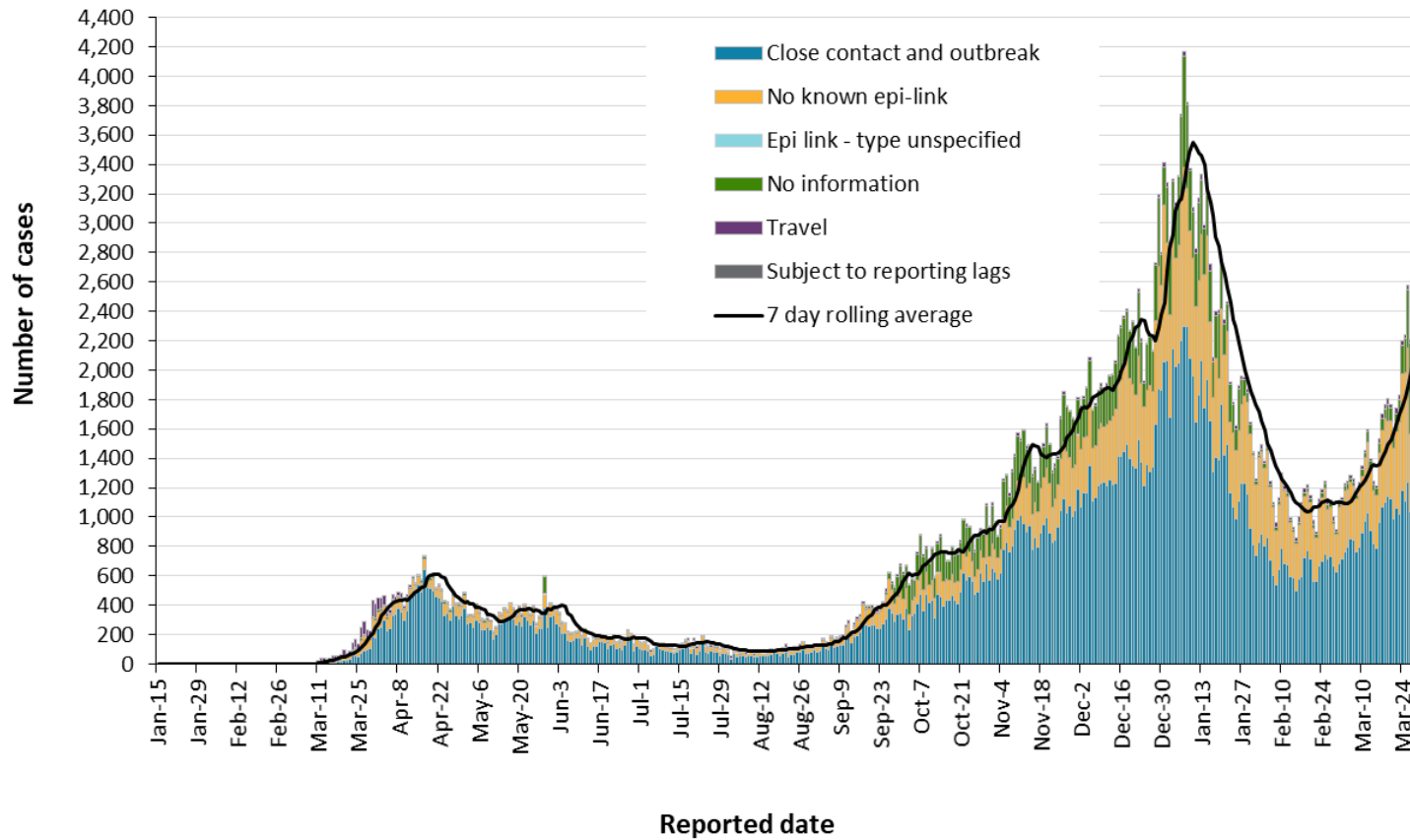
Long-term care home cases	Change in cases March 30, 2021	Change in cases March 31, 2021	Cumulative case count as of March 31, 2021
Residents	7	3	15,047
Health care workers	1	-1	6,819
Deaths among residents	4	0	3,901
Deaths among health care workers	0	0	10

**Note:** Information on how long-term care home residents and health care workers are identified is available in the technical notes. Also, the change in cases in these categories may represent existing case records that have been updated.

**Data Source:** CCM

# Time

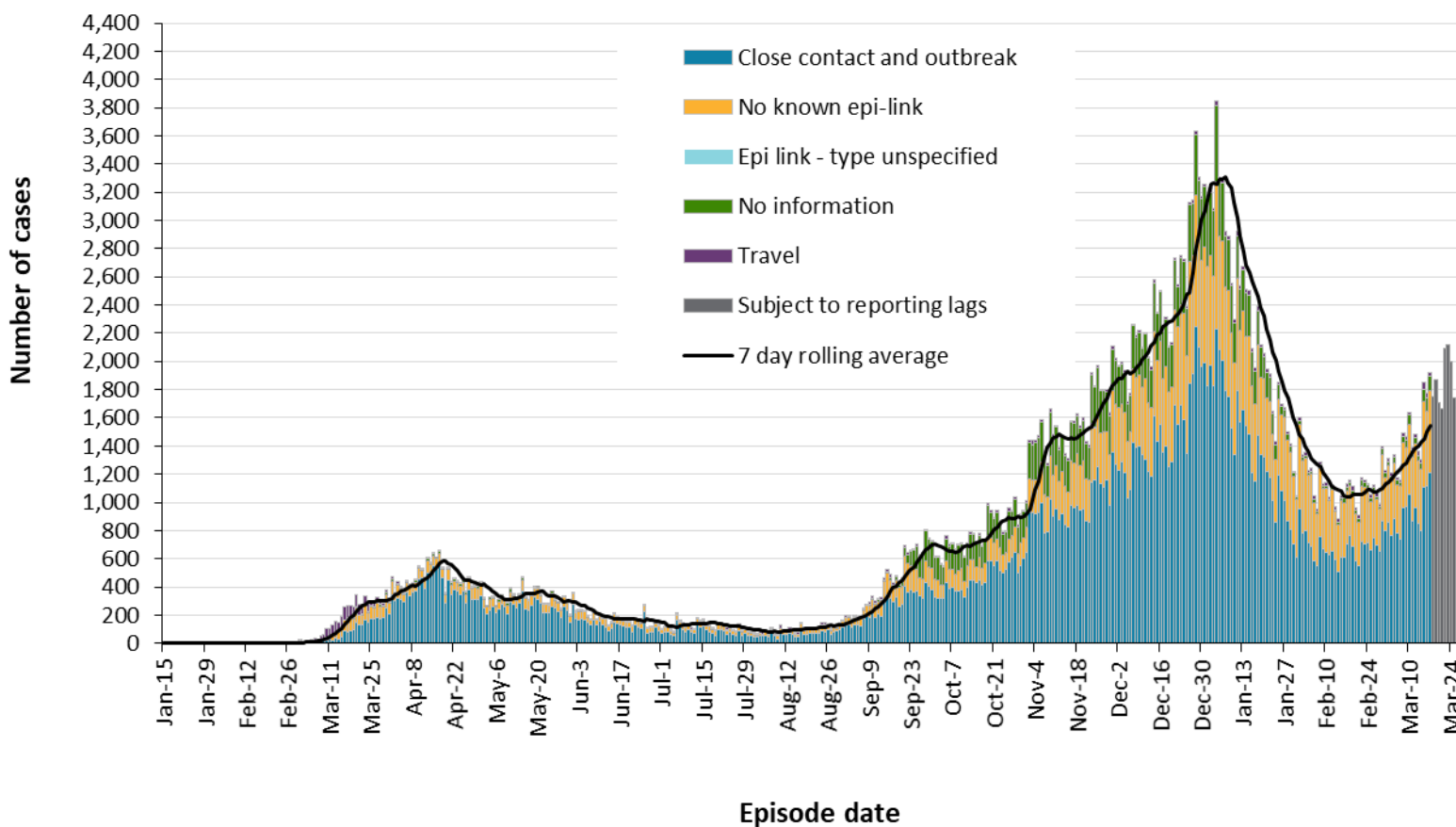
Figure 1. Confirmed cases of COVID-19 by likely acquisition and public health unit reported date: Ontario, January 15, 2020 to March 31, 2021



Data Source: CCM

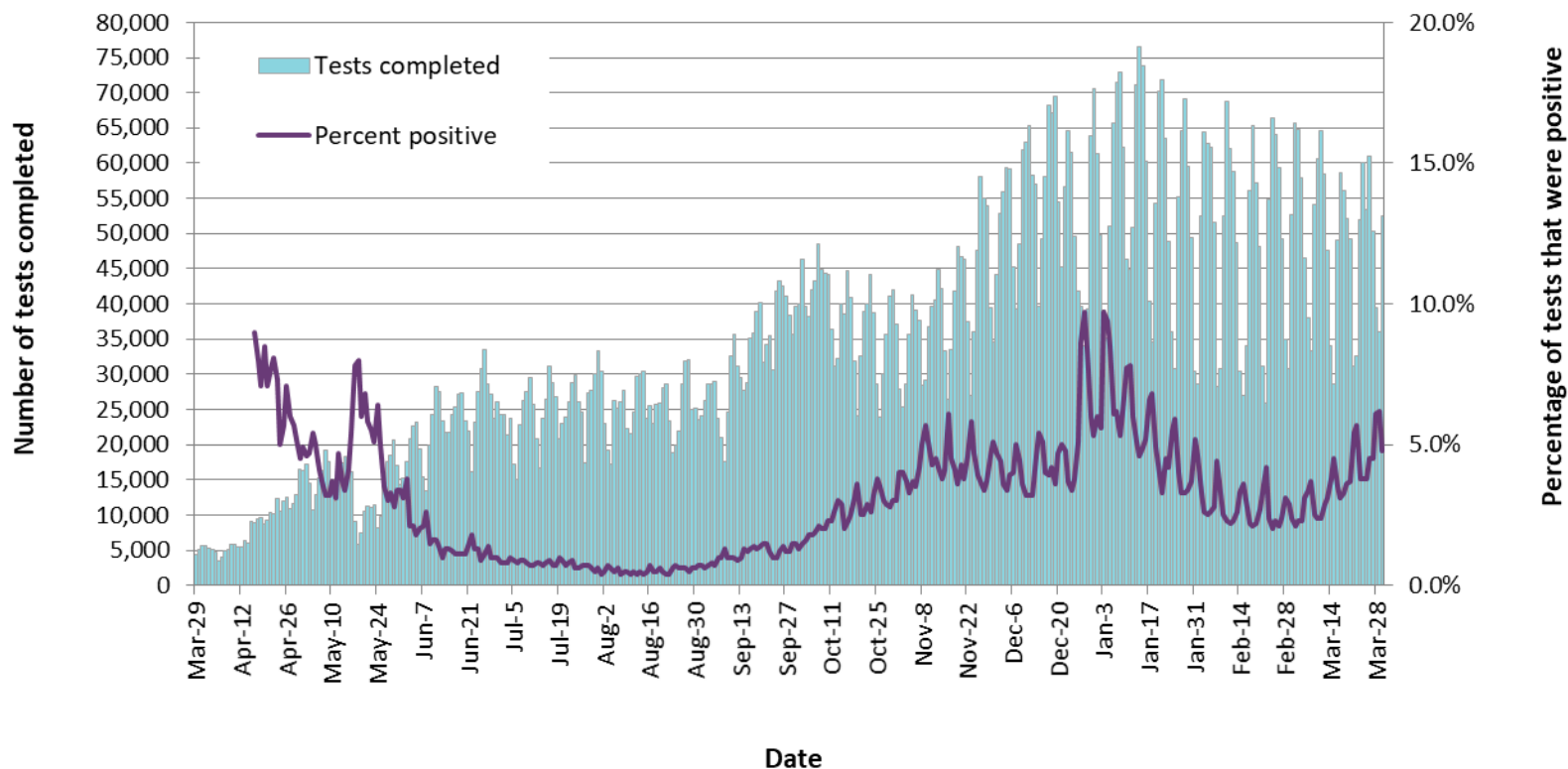
COVID-19 in Ontario: January 15, 2020 to March 31, 2021

**Figure 2. Confirmed cases of COVID-19 by likely acquisition and approximation of symptom onset date: Ontario, January 15, 2020 to March 31, 2021**



**Note:** Not all cases may have an episode date and those without one are not included in the figure. Episode date is defined and available in the technical notes.  
**Data Source:** CCM

**Figure 3. Number of COVID-19 tests completed and percent positivity: Ontario, March 29, 2020 to March 30, 2021**

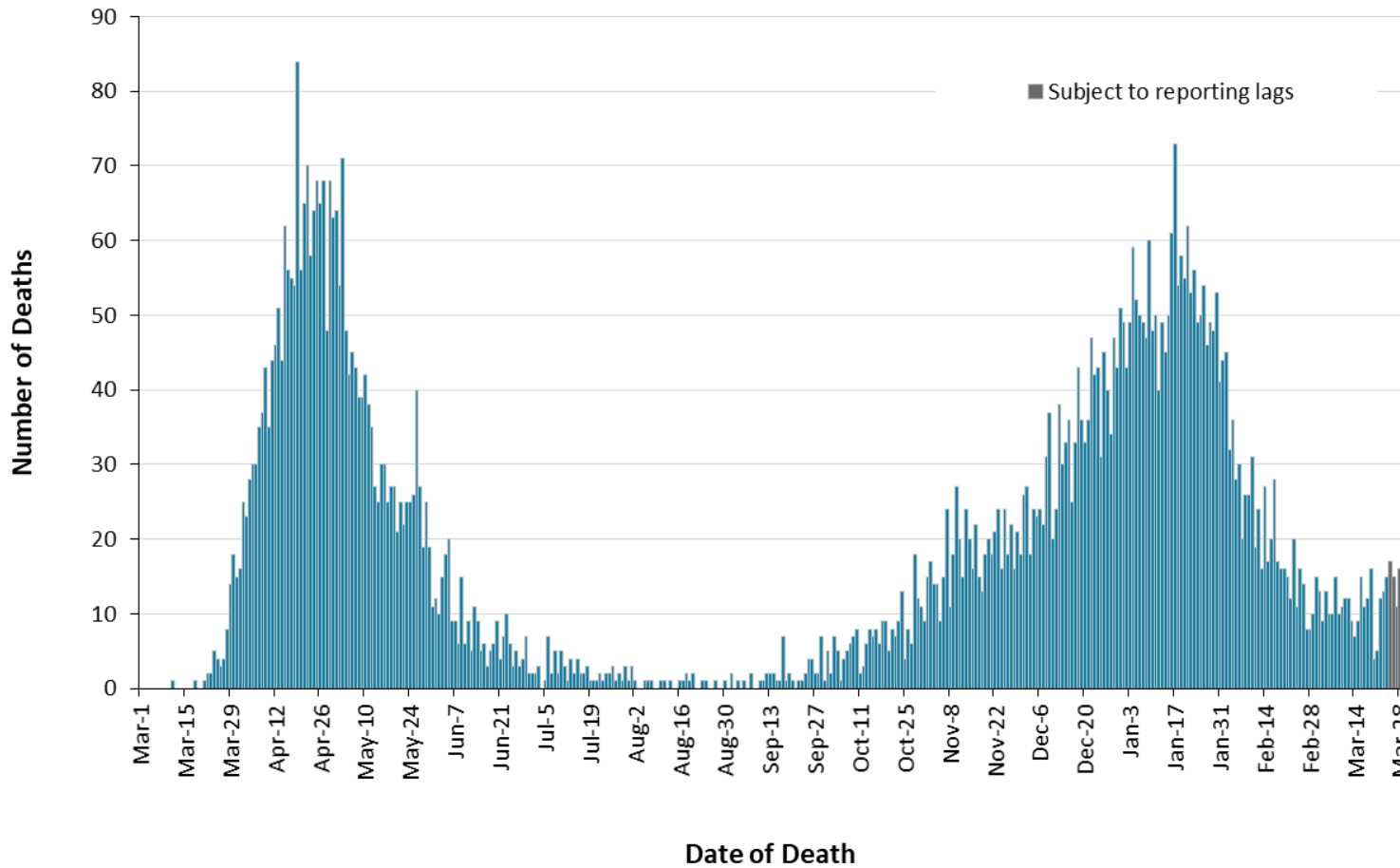


**Note:** The number of tests performed does not reflect the number of specimens or persons tested. More than one test may be performed per specimen or per person. As such, the percentage of tests that were positive does not necessarily translate to the number of specimens or persons testing positive.

**Data Source:** The Provincial COVID-19 Diagnostics Network, data reported by member microbiology laboratories.

# Severity

Figure 4. Confirmed deaths among COVID-19 cases by date of death: Ontario, March 1, 2020 to March 31, 2021



**Note:** Cases without a death date are not included in the figure.

**Data Source:** CCM

COVID-19 in Ontario: January 15, 2020 to March 31, 2021



**Table 4. Confirmed cases of COVID-19 by severity: Ontario**

	Cumulative case count as of March 31, 2021	Percentage of all cases
Cumulative deaths reported (please note there may be a reporting delay for deaths)	7,389	2.1%
Deaths reported in ages: 19 and under	2	<0.1%
Deaths reported in ages: 20-39	34	<0.1%
Deaths reported in ages: 40-59	314	0.3%
Deaths reported in ages: 60-79	2,086	4.2%
Deaths reported in ages: 80 and over	4,952	23.1%
Ever in ICU	3,005	0.9%
Ever hospitalized	17,095	4.9%

**Note:** Not all cases have an age reported. Data corrections or updates can result in case records being removed and/or updated and may result in totals differing from past publicly reported case counts.

**Data Source:** CCM

## Geography

**Table 5. Summary of recent confirmed cases of COVID-19 by public health unit and region: Ontario**

Public Health Unit Name	Change in cases March 30, 2021	Change in cases March 31, 2021	Cumulative case count	Cumulative rate per 100,000 population
Northwestern Health Unit	5	5	684	780.2
Thunder Bay District Health Unit	30	27	2,867	1,911.8
<b>TOTAL NORTH WEST</b>	35	32	3,551	1,494.3
Algoma Public Health	0	1	230	201.0
North Bay Parry Sound District Health Unit	1	3	291	224.3
Porcupine Health Unit	2	4	356	426.6
Public Health Sudbury & Districts	26	13	1,426	716.5
Timiskaming Health Unit	0	2	127	388.5
<b>TOTAL NORTH EAST</b>	29	23	2,430	434.4
Ottawa Public Health	124	131	17,388	1,648.7
Eastern Ontario Health Unit	20	37	3,271	1,567.2
Hastings Prince Edward Public Health	7	30	519	308.0
Kingston, Frontenac and Lennox & Addington Public Health	7	3	905	425.4
Leeds, Grenville & Lanark District Health Unit	6	7	1,251	722.4
Renfrew County and District Health Unit	0	2	434	399.5
<b>TOTAL EASTERN</b>	164	210	23,768	1,233.8

Public Health Unit Name	Change in cases March 30, 2021	Change in cases March 31, 2021	Cumulative case count	Cumulative rate per 100,000 population
Durham Region Health Department	120	107	14,236	1,998.3
Haliburton, Kawartha, Pine Ridge District Health Unit	3	15	1,157	612.4
Peel Public Health	433	484	70,060	4,362.5
Peterborough Public Health	5	9	868	586.6
Simcoe Muskoka District Health Unit	24	73	7,795	1,300.1
York Region Public Health	222	311	33,802	2,757.6
<b>TOTAL CENTRAL EAST</b>	807	999	127,918	2,854.9
Toronto Public Health	785	743	109,857	3,520.7
<b>TOTAL TORONTO</b>	785	743	109,857	3,520.7
Chatham-Kent Public Health	1	14	1,620	1,523.7
Grey Bruce Health Unit	1	14	800	470.9
Huron Perth Public Health	1	4	1,437	1,028.2
Lambton Public Health	3	30	2,852	2,177.7
Middlesex-London Health Unit	93	71	7,154	1,409.6
Southwestern Public Health	20	13	2,835	1,340.4
Windsor-Essex County Health Unit	50	37	13,887	3,268.8
<b>TOTAL SOUTH WEST</b>	169	183	30,585	1,808.9
Brant County Health Unit	10	27	2,210	1,423.9
City of Hamilton Public Health Services	153	119	12,965	2,189.4

Public Health Unit Name	Change in cases March 30, 2021	Change in cases March 31, 2021	Cumulative case count	Cumulative rate per 100,000 population
Haldimand-Norfolk Health Unit	5	16	1,615	1,415.7
Halton Region Public Health	50	82	10,638	1,718.3
Niagara Region Public Health	77	34	9,697	2,052.3
Region of Waterloo Public Health and Emergency Services	38	46	11,940	2,043.3
Wellington-Dufferin-Guelph Public Health	11	43	5,286	1,694.7
<b>TOTAL CENTRAL WEST</b>	<b>344</b>	<b>367</b>	<b>54,351</b>	<b>1,907.5</b>
<b>TOTAL ONTARIO</b>	<b>2,333</b>	<b>2,557</b>	<b>352,460</b>	<b>2,371.2</b>

**Notes:** Health units with data corrections or updates could result in records being removed from totals resulting in negative counts.

**Data Source:** CCM

## Outbreaks

**Table 6. Summary of recent confirmed COVID-19 outbreaks reported in long-term care homes, retirement homes and hospitals by status: Ontario**

Institution type	Change in outbreaks March 30, 2021	Change in outbreaks March 31, 2021	Number of ongoing outbreaks	Cumulative number of outbreaks reported
Long-term care homes	1	5	58	1,375
Retirement homes	3	3	46	827
Hospitals	0	4	34	461

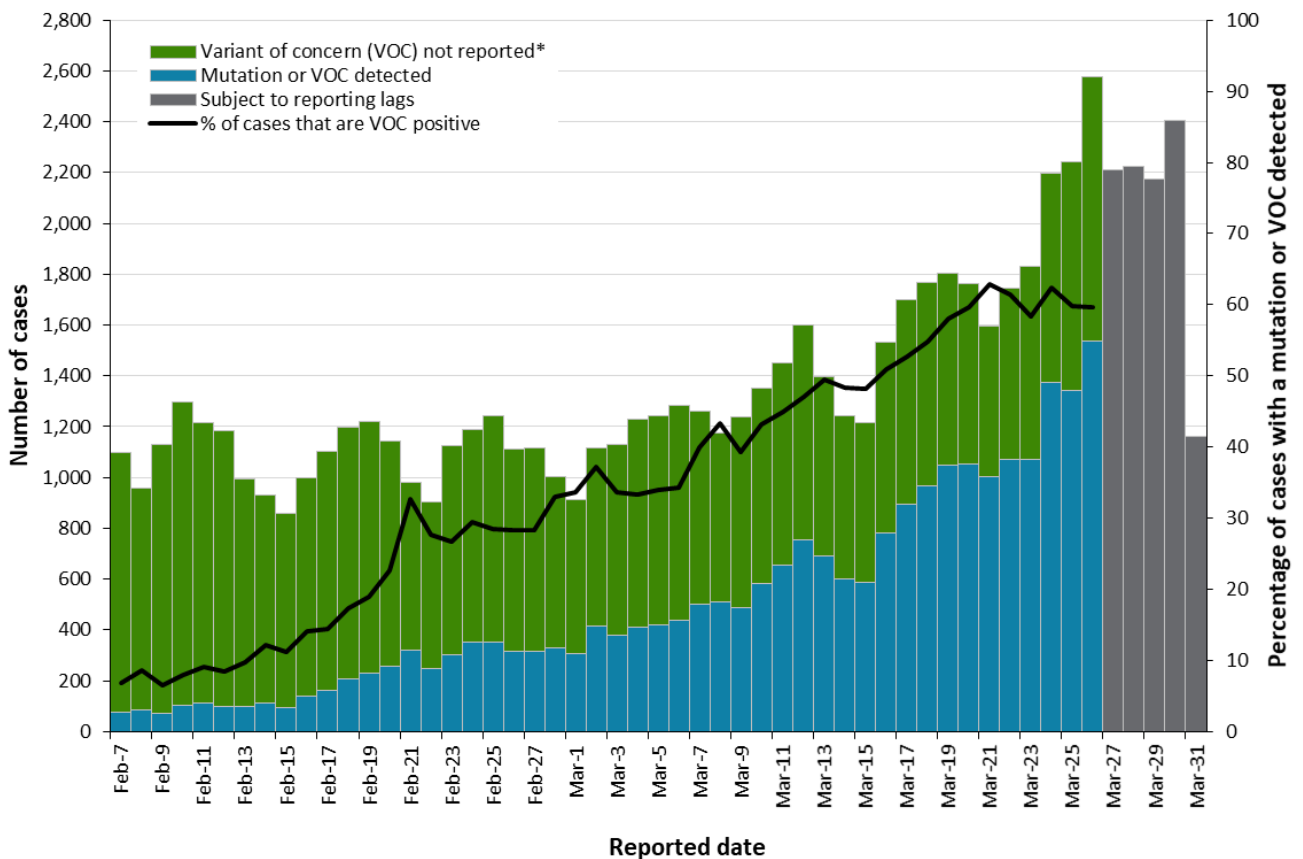
**Note:** Ongoing outbreaks include all outbreaks that are 'Open' in CCM without a 'Declared Over Date' recorded, or where the outbreak started more than five months ago, even for outbreaks where the Outbreak Status value selected in CCM is 'OPEN'. The start of the outbreak is determined by the onset date of first case, or if missing the outbreak reported date, or else if that is also missing, then the outbreak created date.

**Data Source:** CCM

## Variant COVID-19 Cases

The laboratory detection of a variant of concern (VOC) is a multi-step process. Samples that test positive for SARS-CoV-2 and have a cycle threshold (Ct) value  $\leq 35$  can be tested for mutations common to variants of concern. If positive for the mutation of interest these samples may then undergo genomic analyses to identify the VOC. VOC lineages may still be confirmed using genomic analysis despite specific S gene mutation(s) being documented as 'unable to complete' due to poor sequence quality at the genome position.

**Figure 5. Number of confirmed COVID-19 cases and percent positive for mutations or VOCs: Ontario, February 7, 2021 to March 31, 2021**



**Note:** Data used to calculate the number of cases tested for mutations common to VOCs or lineages using genomic analyses are obtained using information from the Laboratory object in CCM in addition to the data from the Investigation Subtype field. Therefore, comparisons to counts using only information from the Investigation Subtype field may not align. The percent of cases due to a VOC may be higher than described in this report. While all confirmed COVID-19 cases are included in the denominator, not all cases were able to be tested for VOCs. \*VOC not reported category includes cases where mutations common to VOCs or lineages were not detected or where testing results were not available/not completed.

**Data Source:** CCM

**Table 7. Summary of confirmed COVID-19 cases with a mutation or VOC detected: Ontario**

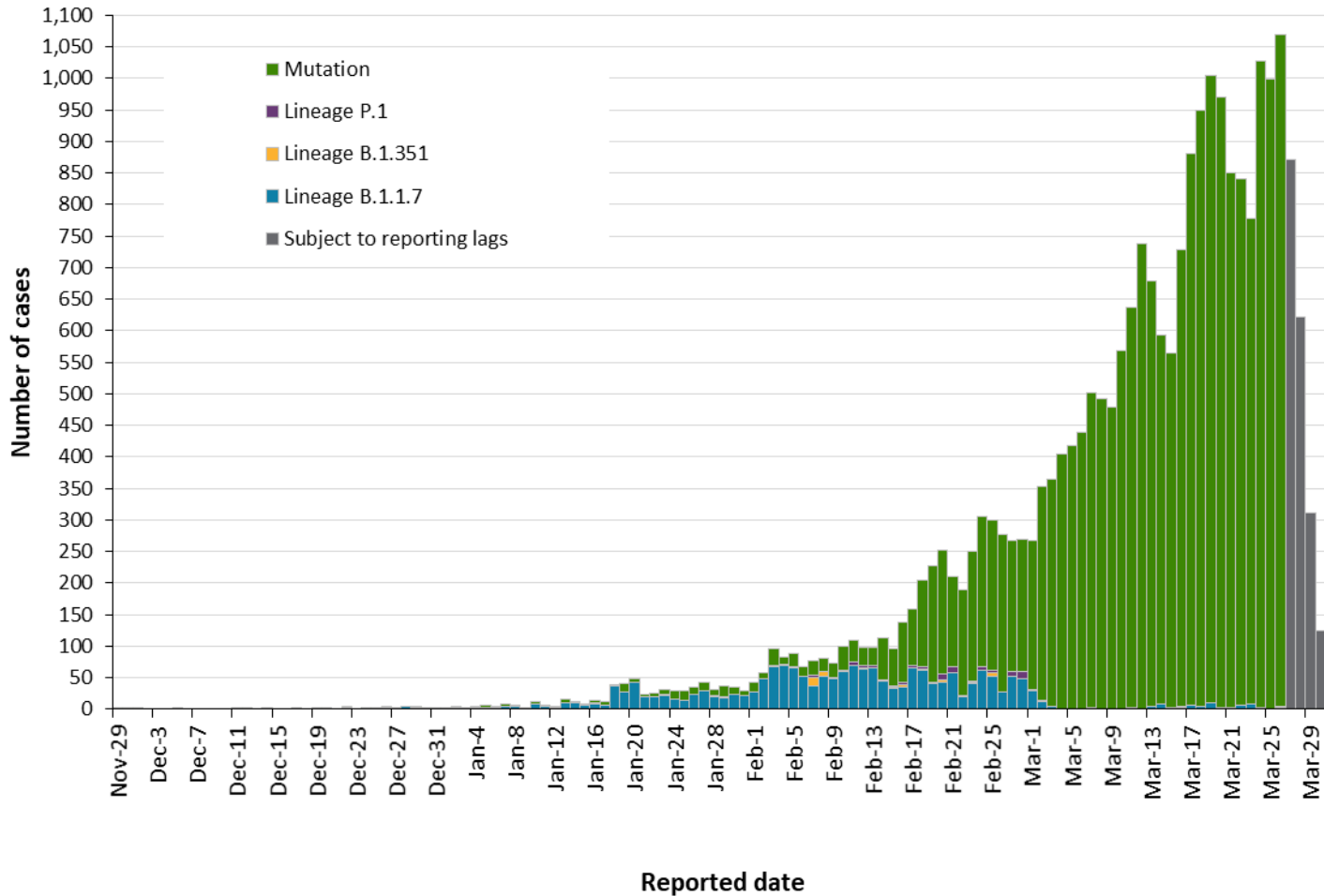
Variant	Change in cases March 30, 2021	Change in cases March 31, 2021	Cumulative case count up to March 31, 2021
Lineage B.1.1.7	98	55	1,953
Lineage B.1.351	1	-3	67
Lineage P.1	2	4	96
Mutation or non-VOC lineage detected*	1,229	1,025	22,371

**Note:** Interpret the VOC and mutation trends with caution due to the varying time required to complete VOC testing and/or genomic analysis following the initial positive test for SARS-CoV-2. Due to the nature of the genomic analysis, test results may be completed in batches. Data corrections or updates can result in case records being removed and/or updated and may result in totals differing from past publicly reported case counts. Data for calculating the change in cases and the cumulative case counts uses data from the Investigation Subtype field only. Changes to the VOC testing algorithm may impact counts and trends. Further details can be found in the [data caveats](#) section.

\*Includes all confirmed COVID-19 cases with a lineage or mutation reported in the Investigation Subtype field, excluding variants of concern B.1.1.7, B.1.351, and P.1 lineages. If a VOC is identified through genomic analysis, the change in cases and/or cumulative case counts for mutations will fluctuate as the case is moved to one of the listed lineages.

**Data Source:** CCM

**Figure 6. Confirmed COVID-19 cases with a mutation or VOC detected by public health unit reported date: Ontario, November 29, 2020 to March 31, 2021**



**Note:** Reported date is based on the date the case was reported, not the date that the VOC or mutation was identified. Further details on testing for variants of concern can be found in the [technical notes](#). Interpret the VOC and mutation trends with caution due to the varying time required to complete testing and/or



genomic analysis following the initial positive test for SARS-CoV-2. Data for calculating the change in cases and the cumulative case count uses data from the Investigation Subtype field only. Data for cases with a B.1.1.7, B.1.351, and P.1 lineage detected are determined using the Investigation Subtype field only. Mutation or non-VOC lineage detected includes all confirmed COVID-19 cases with a lineage or mutation detected reported from the Investigation Subtype field excluding B.1.1.7, B.1.351, and P.1 lineages. Changes to the VOC testing algorithm may impact counts and trends. Further details can be found in the [data caveats](#) section.

**Data Source:** CCM

# Technical Notes

## Data Sources

- The data for this report were based on information successfully extracted from the Public Health Case and Contact Management Solution (CCM) for all PHUs by PHO as of **March 31, 2021 at 1 p.m.**
- CCM is a dynamic disease reporting system, which allows ongoing updates to data previously entered. As a result, data extracted from CCM represent a snapshot at the time of extraction and may differ from previous or subsequent reports.
- Ontario population projection data for 2020 were sourced from Ministry, IntelliHEALTH Ontario. Data were extracted on November 26, 2019.
- COVID-19 test data were based on information from The Provincial COVID-19 Diagnostics Network, reported by member microbiology laboratories.

## Data Caveats

- The data only represent cases reported to public health units and recorded in CCM. As a result, all counts will be subject to varying degrees of underreporting due to a variety of factors, such as disease awareness and medical care seeking behaviours, which may depend on severity of illness, clinical practice, changes in laboratory testing, and reporting behaviours.
- Lags in CCM data entry due to weekend staffing may result in lower case counts than would otherwise be recorded.
- Only cases meeting the confirmed case classification as listed in the [MOH Case Definition – Coronavirus Disease \(COVID-19\) document](#)
- Cases of confirmed reinfection, as defined in the provincial case definitions, are counted as unique investigations.
- Case classification information may be updated for individuals with a positive result issued from a point-of-care assays.
- The number of tests performed does not reflect the number of specimens or persons tested. More than one test may be performed per specimen or per person. As such, the percentage of tests that were positive does not necessarily translate to the number of specimens or persons testing positive.
- Reported date is the date the case was reported to the public health unit.
- Case episode date is based on an estimate of the best date of disease onset. This date is calculated based on either the date of symptom onset, specimen collection/test date, or the date reported to the public health unit.

- Resolved cases are determined only for COVID-19 cases that have not died. Cases that have died are considered fatal and not resolved. The following cases are classified as resolved:
  - Cases that are reported as ‘recovered’ in CCM
  - Cases that are not hospitalized and are 14 days past their episode date
  - Cases that are currently hospitalized (no hospital end date entered) and have a status of ‘closed’ in CCM (indicating public health unit follow-up is complete) and are 14 days past their symptom onset date or specimen collection date
- Hospitalization includes all cases for which a hospital admission date was reported at the time of data extraction. It includes cases that have been discharged from hospital as well as cases that are currently hospitalized. Emergency room visits are not included in the number of reported hospitalizations.
- ICU admission includes all cases for which an ICU admission date was reported at the time of data extraction. It is a subset of the count of hospitalized cases. It includes cases that have been treated or that are currently being treated in an ICU.
- Orientation of case counts by geography is based on the diagnosing health unit (DHU). DHU refers to the case's public health unit of residence at the time of illness onset and not necessarily the location of exposure. Cases for which the DHU was reported as MOH-PHO (to signify a case that is not a resident of Ontario) have been excluded from the analyses.
- Likely source of acquisition is determined by examining the epidemiologic link and epidemiologic link status fields in CCM. If no epidemiologic link is identified in those fields the risk factor fields are examined to determine whether a case travelled, was associated with a confirmed outbreak, was a contact of a case, had no known epidemiological link (sporadic community transmission) or was reported to have an unknown source/no information was reported. Some cases may have no information reported if the case is untraceable, was lost to follow-up or referred to FNIHB. Cases with multiple risk factors were assigned to a single likely acquisition source group which was determined hierarchically in the following order:
  - For cases with an episode date *on or after* April 1, 2020: Outbreak-associated > close contact of a confirmed case > travel > no known epidemiological link > information missing or unknown
  - For cases with an episode date *before* April 1, 2020: Travel > outbreak-associated > close contact of a confirmed case > no known epidemiological link > information missing or unknown
- Deaths are determined by using the outcome field in CCM. Any case marked ‘Fatal’ is included in the deaths data. The CCM field Type of Death is not used to further categorize the data.
  - The date of death is determined using the outcome date field for cases marked as ‘Fatal’ in the outcome field.
- COVID-19 cases from CCM for which the Classification and/or Disposition was reported as ENTERED IN ERROR, DOES NOT MEET DEFINITION, IGNORE, DUPLICATE or any variation on these

values have been excluded. The provincial case count for COVID-19 may include some duplicate records, if these records were not identified and resolved.

- Ongoing outbreaks include all outbreaks that are 'Open' in CCM without a 'Declared Over Date' recorded, or where the outbreak started more than five months ago, even for outbreaks where the Outbreak Status value selected in CCM is 'OPEN'. The start of the outbreak is determined by the onset date of first case, or if missing the outbreak reported date, or else if that is also missing, then the outbreak created date.
- 'Long-term care home residents' includes cases that reported 'Yes' to the risk factor 'Resident of a long-term care home'; or 'Yes' to the risk factor 'Resident of nursing home or other chronic care facility' and reported to be part of an outbreak assigned as a long-term care home (via the Outbreak number or case comments field); or were reported to be part of an outbreak assigned as a long-term care home (via the outbreak number or case comments field) with an age over 70 years and did not report 'No' to the risk factors 'Resident of long-term care home' or 'Resident of nursing home or other chronic care facility'. 'Long-term care home residents' excludes cases that reported 'Yes' to any of the health care worker occupational risk factors.
- The 'health care workers' variable includes cases that reported 'Yes' to any of the occupation of health care worker, doctor, nurse, dentist, dental hygienist, midwife, other medical technicians, personal support worker, respiratory therapist, first responder.
- 'Health care workers associated with long-term care outbreaks' includes 'health care workers' reported to be part of an outbreak assigned as a long-term care home (via the outbreak number or case comments field). Excludes cases that reported 'Yes' to risk factors 'Resident of long-term care home' or 'Resident of nursing home or other chronic care facility' and 'Yes' to the calculated 'health care workers' variable.
- Percent change is calculated by taking the difference between the current period (i.e., daily count or sum of the daily count over a 7-day period) and previous period (i.e., daily count or sum of the daily count over a 7-day period), divided by the previous period.
- PANGO lineage B.1.1.7: This lineage was first detected in England in September, 2020. Early evidence suggests that the N501Y mutation may increase SARS-CoV-2 transmissibility. The PANGO lineage B.1.1.7 is assigned to genome sequences with at least 5 of the 17 defining B.1.1.7 SNPs.
- PANGO lineage B.1.351 (also known as 501Y.V2): This lineage was first detected October, 2020 in South Africa and has several mutations of concern, including spike (S) gene: N501Y, K417N, and E484K. Early evidence suggests that these mutations may increase SARS-CoV-2 transmissibility and decrease vaccine efficacy. The PANGO lineage B.1.351 will be assigned to genome sequences at least 5 of the 9 defining B.1.351 SNPs.
- PANGO lineage P.1 (also known as 501Y.V3): This lineage was first detected January, 2021 in Brazil and has several mutations of concern, including spike (S) gene N501Y, K417T, and E484K. Early evidence suggests that these mutations may increase SARS-CoV-2 transmissibility and decrease vaccine efficacy. The PANGO lineage P.1 is assigned to genome sequences with more than 10 of the 17 defining P.1 SNPs.

- Public Health Ontario conducts testing and genomic analyses for SARS-CoV-2 positive specimens using the criteria outlined here: <https://www.publichealthontario.ca/en/laboratory-services/test-information-index/covid-19-voc>
- Changes to the VOC testing algorithm may occur over time and trends should be interpreted with caution. Since February 3, 2021 all PCR positive SARS-CoV-2 specimens with CT values  $\leq 35$  are tested for a N501Y mutation. Starting March 22, 2021, these specimens are tested for the E484K mutation as well. Specimens that are positive for the N501Y mutation only are not being forwarded for further genomic analysis. Specimens that are E484K positive (with or without N501Y) are forwarded for genomic analysis.
- The laboratory detection of a variant of concern is a multi-step process. Samples that test positive for SARS-CoV-2 and have a cycle threshold (Ct) value  $\leq 35$  can be tested for mutations common to variants of concern. If positive for the mutation of interest these samples may then undergo genomic analyses to identify the VOC. VOC lineages may still be confirmed using genomic analysis despite specific S gene mutation(s) being documented as 'unable to complete' due to poor sequence quality at the genome position.
- VOC testing data are analyzed for cases with a reported date on or after February 07, 2021. VOC testing data are based on CCM information reported within the laboratory object for select Logical Observation Identifiers Names and Codes (LOINC) and supplemented with information from the Investigation Subtype field. A confirmed Case Investigation is assigned a VOC test value (e.g., VOC test detected, VOC test not detected) based on the following hierarchy:
  - If multiple laboratory results are identified, a VOC test value is assigned based on the following hierarchy: Detected > Not Detected > Unable to complete
  - If a laboratory result is 'Not Detected' or 'Unable to complete', but data on the Investigation Subtype field is listed as a lineage or mutation common to a VOC, then the VOC test value is set to 'Detected'
- If a VOC is identified through genomic analysis cases initially classified as a mutation may be updated and moved to the appropriate lineage (B.1.1.7, B.1.351 and P.1)
- LOINCs are a set of internationally used result description codes. In the absence of a standard LOINC, Ontario Health can create local result codes, which are identified with an 'XON' prefix. LOINCs incorporate details of the result value (e.g. test method, target detected - such as IgG, DNA, isolate etc.) and are unique to each result.
- VOC testing data in this report are assigned on a per case basis. Multiple laboratory results may be associated to a single case investigation, but for analysis purposes are only counted once.
  - The percent of cases that test VOC positive is calculated by taking the number of VOC test positive, divided by the total number of confirmed COVID-19 cases for a given reported date.
- The VOC percent positive may be higher than described in this report. While all confirmed COVID-19 cases are included in the denominator, not all cases were able to be tested for VOCs. As testing algorithms change, the VOC percent positivity may not be reflective of the exact number of COVID-19 cases due to VOCs

- Only CCM case investigations with a CONFIRMED classification have their laboratory records with VOC testing information included in the percent positivity calculations

## Appendix A

**Table A1. Weekly rates of confirmed COVID-19 cases per 100,000 population over recent rolling 7-day periods, by reported date and public health unit: Ontario, March 16 to March 28, 2021**

Public Health Unit Name	Mar 16 to Mar 22	Mar 17 to Mar 23	Mar 18 to Mar 24	Mar 19 to Mar 25	Mar 20 to Mar 26	Mar 21 to Mar 27	Mar 22 to Mar 28	% change from Mar 16- Mar 22 to Mar 22- Mar 28
<b>NORTH WEST</b>								
Northwestern Health Unit	55.9	52.5	49.0	46.8	45.6	37.6	38.8	-30.6%
Thunder Bay District Health Unit	143.4	134.7	122.0	113.4	109.4	112.0	116.0	-19.1%
<b>NORTH EAST</b>								
Algoma Public Health	9.6	6.1	4.4	5.2	3.5	4.4	6.1	-36.5%
North Bay Parry Sound District Health Unit	10.8	10.8	10.8	8.5	2.3	0.8	1.5	-86.1%
Porcupine Health Unit	2.4	2.4	3.6	4.8	4.8	4.8	4.8	+100.0%
Public Health Sudbury & Districts	100.5	97.0	111.0	100.5	97.5	102.5	96.0	-4.5%
Timiskaming Health Unit	30.6	39.8	42.8	42.8	39.8	39.8	33.7	+10.1%
<b>EASTERN</b>								
Ottawa Public Health	54.3	57.0	59.1	65.2	64.6	69.7	75.3	+38.7%
Eastern Ontario Health Unit	76.2	81.0	87.2	88.2	89.6	93.0	100.1	+31.4%
Hastings Prince Edward Public Health	4.2	4.7	5.9	8.3	11.9	18.4	22.0	+423.8%
Kingston, Frontenac and Lennox & Addington Public Health	39.5	38.1	31.0	28.7	24.4	24.9	21.6	-45.3%

Public Health Unit Name	Mar 16 to Mar 22	Mar 17 to Mar 23	Mar 18 to Mar 24	Mar 19 to Mar 25	Mar 20 to Mar 26	Mar 21 to Mar 27	Mar 22 to Mar 28	% change from Mar 16-Mar 22 to Mar 22-Mar 28
Leeds, Grenville & Lanark District Health Unit	83.2	78.5	78.0	76.2	62.4	60.1	61.2	-26.4%
Renfrew County and District Health Unit	12.0	14.7	20.3	23.9	24.9	25.8	24.9	+107.5%
<b>CENTRAL EAST</b>								
Durham Region Health Department	82.7	88.2	92.2	96.2	106.7	123.0	128.6	+55.5%
Haliburton, Kawartha, Pine Ridge District Health Unit	12.7	11.6	10.6	9.5	11.6	11.6	14.3	+12.6%
Peel Public Health	141.7	146.5	148.8	152.8	161.5	161.5	164.6	+16.2%
Peterborough Public Health	32.4	28.4	27.0	29.7	23.7	23.7	25.0	-22.8%
Simcoe Muskoka District Health Unit	49.0	49.2	48.5	49.9	51.2	51.5	55.0	+12.2%
York Region Public Health	96.4	96.4	101.6	107.0	116.7	124.0	135.8	+40.9%
<b>TORONTO</b>								
Toronto Public Health	113.9	119.8	127.7	134.9	145.8	148.8	153.0	+34.3%
<b>SOUTH WEST</b>								
Chatham-Kent Public Health	86.5	90.3	68.7	59.3	64.9	55.5	57.4	-33.6%
Grey Bruce Health Unit	17.7	18.2	23.0	24.1	26.5	24.7	27.7	+56.5%
Huron Perth Public Health	8.6	7.2	5.7	9.3	7.9	10.7	10.7	+24.4%
Lambton Public Health	164.2	148.1	161.9	146.6	151.2	142.0	140.5	-14.4%
Middlesex-London Health Unit	34.5	37.0	42.2	46.5	51.6	58.7	66.2	+91.9%



Public Health Unit Name	Mar 16 to Mar 22	Mar 17 to Mar 23	Mar 18 to Mar 24	Mar 19 to Mar 25	Mar 20 to Mar 26	Mar 21 to Mar 27	Mar 22 to Mar 28	% change from Mar 16-Mar 22 to Mar 22-Mar 28
Southwestern Public Health	33.6	32.6	35.9	39.2	42.6	44.0	46.3	+37.8%
Windsor-Essex County Health Unit	43.3	41.9	39.3	37.2	42.6	45.4	48.7	+12.5%
<b>CENTRAL WEST</b>								
Brant County Health Unit	39.9	38.7	45.7	50.3	45.1	43.8	50.3	+26.1%
City of Hamilton Public Health Services	109.8	110.9	116.9	118.2	121.3	120.4	123.3	+12.3%
Haldimand-Norfolk Health Unit	43.0	46.5	52.6	54.3	60.5	66.6	68.4	+59.1%
Halton Region Public Health	51.5	52.7	54.1	57.2	55.2	57.2	64.9	+26.0%
Niagara Region Public Health	51.2	53.1	53.1	57.8	64.6	67.7	70.9	+38.5%
Region of Waterloo Public Health and Emergency Services	39.9	38.2	40.0	40.0	46.4	49.6	52.2	+30.8%
Wellington-Dufferin-Guelph Public Health	39.8	39.1	38.8	39.1	39.8	39.4	39.4	-1.0%
<b>TOTAL ONTARIO</b>	<b>80.1</b>	<b>82.1</b>	<b>85.5</b>	<b>88.7</b>	<b>93.9</b>	<b>96.9</b>	<b>101.1</b>	<b>+26.2%</b>

**Note:** Rates are based on the sum of the daily case counts during the date ranges specified in each column.

**Data Source:** CCM

**Table A2. Summary of confirmed COVID-19 cases with a mutation or VOC by public health unit: Ontario as of March 31, 2021**

Public Health Unit Name	Cumulative count for Lineage B.1.1.7	Cumulative count for Lineage B.1.351	Cumulative count for Lineage P.1	Cumulative count for mutation or non-VOC lineage detected
Algoma Public Health	0	0	0	3
Brant County Health Unit	2	0	0	86
Chatham-Kent Public Health	4	0	0	49
City of Hamilton Public Health Services	15	0	0	872
Durham Region Health Department	74	0	4	1,558
Eastern Ontario Health Unit	0	1	0	261
Grey Bruce Health Unit	0	0	0	30
Haldimand-Norfolk Health Unit	4	0	0	53
Haliburton, Kawartha, Pine Ridge District Health Unit	5	0	0	54
Halton Region Public Health	54	0	1	675
Hastings Prince Edward Public Health	0	0	2	27
Huron Perth Public Health	0	0	0	13
Kingston, Frontenac and Lennox & Addington Public Health	1	0	0	83
Lambton Public Health	0	0	0	132
Leeds, Grenville & Lanark District Health Unit	0	0	0	45

Public Health Unit Name	Cumulative count for Lineage B.1.1.7	Cumulative count for Lineage B.1.351	Cumulative count for Lineage P.1	Cumulative count for mutation or non-VOC lineage detected
Middlesex-London Health Unit	7	0	0	173
Niagara Region Public Health	13	0	0	296
North Bay Parry Sound District Health Unit	5	27	0	22
Northwestern Health Unit	1	0	0	7
Ottawa Public Health	23	6	0	562
Peel Public Health	388	10	18	3,340
Peterborough Public Health	3	0	0	195
Porcupine Health Unit	0	2	0	3
Public Health Sudbury & Districts	5	0	0	409
Region of Waterloo Public Health and Emergency Services	27	0	0	430
Renfrew County and District Health Unit	0	0	0	17
Simcoe Muskoka District Health Unit	378	1	16	812
Southwestern Public Health	5	0	0	71
Thunder Bay District Health Unit	0	0	0	4
Timiskaming Health Unit	0	1	0	17
Toronto Public Health	501	17	40	9,040

Public Health Unit Name	Cumulative count for Lineage B.1.1.7	Cumulative count for Lineage B.1.351	Cumulative count for Lineage P.1	Cumulative count for mutation or non-VOC lineage detected
Wellington-Dufferin-Guelph Public Health	7	0	0	221
Windsor-Essex County Health Unit	6	0	0	78
York Region Public Health	425	2	15	2,733
<b>TOTAL ONTARIO</b>	<b>1,953</b>	<b>67</b>	<b>96</b>	<b>22,371</b>

**Note:** Interpret the VOC and mutation trends with caution due to the varying time required to complete VOC testing and/or genomic analysis following the initial positive test for SARS-CoV-2. Due to the nature of the genomic analysis, test results may be completed in batches. Data corrections or updates can result in case records being removed and/or updated and may result in totals differing from past publicly reported case counts. Data for calculating the change in cases and the cumulative case count uses data from the Investigation Subtype field only. Changes to the VOC testing algorithm may impact counts and trends. Further details can be found in the [data caveats](#) section.

Mutation or non-VOC lineage detected includes all confirmed COVID-19 cases with a lineage or mutation detected reported in the Investigation subtype field excluding B.1.1.7, B.1.351, and P.1 lineages. If a VOC is identified through genomic analysis, the change in cases and/or cumulative case counts for mutations will fluctuate as the case is moved to one of the listed lineages.

**Data Source:** CCM

**Table A3. Weekly percent positivity for cases tested for mutations or VOCs over recent rolling 7-day periods, by reported date and public health unit: Ontario, March 14 to March 26, 2021**

Public Health Unit Name	March 14 to March 20	March 15 to March 21	March 16 to March 22	March 17 to March 23	March 18 to March 24	March 19 to March 25	March 20 to March 26
Algoma Public Health	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brant County Health Unit	23.3	25.7	32.3	30.0	33.8	30.8	37.1
Chatham-Kent Public Health	24.5	29.6	32.6	39.6	41.1	46.0	47.8
City of Hamilton Public Health Services	42.1	43.6	44.3	44.9	48.6	50.7	49.4
Durham Region Health Department	69.1	69.6	70.5	71.3	71.5	74.0	76.8
Eastern Ontario Health Unit	55.9	56.3	62.3	69.2	69.2	67.4	69.5
Grey Bruce Health Unit	35.7	35.5	36.7	38.7	35.9	29.3	31.1
Haldimand-Norfolk Health Unit	51.4	42.1	40.8	43.4	48.3	48.4	50.7
Haliburton, Kawartha, Pine Ridge District Health Unit	48.0	50.0	45.8	45.5	65.0	66.7	63.6
Halton Region Public Health	43.8	46.9	49.8	52.8	55.2	61.3	64.6
Hastings Prince Edward Public Health	50.0	50.0	28.6	25.0	20.0	28.6	45.0
Huron Perth Public Health	16.7	16.7	16.7	10.0	12.5	30.8	36.4
Kingston, Frontenac and Lennox & Addington Public Health	38.6	38.4	38.1	38.3	43.9	47.5	51.9
Lambton Public Health	18.5	19.9	20.5	22.7	24.5	29.2	28.8

<b>Public Health Unit Name</b>	<b>March 14 to March 20</b>	<b>March 15 to March 21</b>	<b>March 16 to March 22</b>	<b>March 17 to March 23</b>	<b>March 18 to March 24</b>	<b>March 19 to March 25</b>	<b>March 20 to March 26</b>
Leeds, Grenville & Lanark District Health Unit	11.3	11.7	11.1	10.3	11.1	13.6	17.6
Middlesex-London Health Unit	14.8	18.6	20.6	23.9	33.2	35.6	36.6
Niagara Region Public Health	36.7	35.9	34.7	32.3	28.7	28.9	23.0
North Bay Parry Sound District Health Unit	73.3	73.3	78.6	78.6	78.6	63.6	33.3
Northwestern Health Unit	1.8	1.9	2.0	2.2	2.3	2.4	5.0
Ottawa Public Health	39.1	42.9	44.3	43.9	44.5	43.3	44.2
Peel Public Health	57.5	59.3	59.4	59.4	60.4	60.5	59.8
Peterborough Public Health	86.3	85.4	85.4	88.1	90.0	86.4	82.9
Porcupine Health Unit	0.0	0.0	0.0	0.0	33.3	75.0	75.0
Public Health Sudbury & Districts	61.2	61.1	59.0	59.1	59.3	62.0	59.8
Region of Waterloo Public Health and Emergency Services	36.1	35.8	38.2	39.0	38.0	41.0	38.0
Renfrew County and District Health Unit	10.0	15.4	15.4	31.3	36.4	50.0	59.3
Simcoe Muskoka District Health Unit	65.4	66.1	68.0	68.5	70.1	70.9	67.8
Southwestern Public Health	36.8	36.1	33.8	34.8	25.0	27.7	22.2
Thunder Bay District Health Unit	0.4	0.4	0.5	1.0	1.1	1.2	1.2

Public Health Unit Name	March 14 to March 20	March 15 to March 21	March 16 to March 22	March 17 to March 23	March 18 to March 24	March 19 to March 25	March 20 to March 26
Timiskaming Health Unit	83.3	87.5	90.0	92.3	92.9	85.7	92.3
Toronto Public Health	70.3	71.5	73.0	73.7	74.9	74.0	73.1
Wellington-Dufferin-Guelph Public Health	41.3	43.5	46.0	48.4	48.8	49.2	51.6
Windsor-Essex County Health Unit	7.3	8.5	8.7	8.4	8.4	8.2	11.0
York Region Public Health	63.2	64.3	66.0	65.1	66.0	66.8	68.3
<b>TOTAL ONTARIO</b>	<b>53.8</b>	<b>55.7</b>	<b>57.3</b>	<b>58.2</b>	<b>59.7</b>	<b>60.4</b>	<b>60.6</b>

**Note:** Data for calculating the number of cases tested for mutations common to VOCs or lineages using genomic analyses are obtained using information from the Laboratory object in CCM in addition to the data from the Investigation subtype field. Therefore, comparisons to counts using only information from the Investigation Subtype field may not align. The percent of cases due to a VOC may be higher than described in this report. While all confirmed COVID-19 cases are included in the denominator, not all cases were able to be tested for VOCs. Percent positivity is based on the sum of the daily cases that test positive divided by the number of cases reported during the date ranges specified in each column.

**Data Source:** CCM.

## Disclaimer

This document was developed by Public Health Ontario (PHO). PHO provides scientific and technical advice to Ontario's government, public health organizations and health care providers. PHO's work is guided by the current best available evidence at the time of publication.

The application and use of this document is the responsibility of the user. PHO assumes no liability resulting from any such application or use.

This document may be reproduced without permission for non-commercial purposes only and provided that appropriate credit is given to PHO. No changes and/or modifications may be made to this document without express written permission from PHO.

## Citation

Ontario Agency for Health Protection and Promotion (Public Health Ontario). Epidemiologic summary: COVID-19 in Ontario – January 15, 2020 to March 31, 2021. Toronto, ON: Queen's Printer for Ontario; 2021.

## For Further Information

For more information, email [cd@oahpp.ca](mailto:cd@oahpp.ca).

## Public Health Ontario

Public Health Ontario is an agency of the Government of Ontario dedicated to protecting and promoting the health of all Ontarians and reducing inequities in health. Public Health Ontario links public health practitioners, front-line health workers and researchers to the best scientific intelligence and knowledge from around the world.

For more information about PHO, visit [publichealthontario.ca](http://publichealthontario.ca).

